

REMARKS/ARGUMENTS

The specification has been amended to correct minor editorial problems. In addition, all of the paragraphs starting from page 10, line 27, through the paragraph ending at page 15, line 5, have been canceled in order to correct an inadvertent duplication of text.

Claims 1-14 are pending in the application. Claims 6-14 have been withdrawn. Claims 1-5 have been rejected and are currently under consideration. With this paper, claims 1-5 have been amended and new claims 15-29 have been added.

Cancellation or amendment of the claims is done without prejudice to reintroducing any material removed as a result of these actions. These actions are not to be considered a waiver or abandonment of any technology otherwise fully described in the application as filed.

Reconsideration and allowance are respectfully requested.

Claim Objections

Claims 1 and 4-5 have been objected to for various informalities. Claim 1 has been amended to replace "gate conductive layer" with "gate line" and claims 2-5 have been amended to depend from claim 1.

Accordingly, Applicants respectfully request withdrawal of the Examiner's objections.

Claim Rejections Under 35 U.S.C. § 102

The Examiner has rejected claim 1 as being anticipated by Akamatsu et al. (U.S. Pat. No. 6,414,730).

Claim 1 has been amended to recite, in part:

a pixel electrode formed on the passivation layer and contacting the drain electrode and the exposed portion of the gate insulating layer through the first contact hole, wherein the gate insulating layer

separates the pixel electrode from the insulating substrate.
(Emphasis added)

The Akamatsu reference cited by the Examiner fails to teach or suggest the claimed structure, and, in particular, that the gate insulating layer separates the pixel electrode from the insulating substrate. As can be seen in Fig. 2A of the Akamatsu reference, the hole 87 passes completely through the gate insulation film 53 such that the transparent conductive film 70 contacts the insulating substrate 51. In contrast, in Fig. 3 of the present application, the bottom of the contact hole 185 is formed by the gate insulating layer 140. Thus, the gate insulating layer 140 separates the pixel electrode 191 from the insulating substrate 110.

As described in MPEP § 2131, a “claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Accordingly, the Examiner’s rejection of claim 1 under § 102 is unsupported by the cited reference. Therefore, Applicants respectfully request withdrawal of the rejection of claim 1.

Claim Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 2-5 as being unpatentable over the Akamatsu reference.

As described above, the Akamatsu reference fails to teach or suggest the structure recited in claim 1. In particular, the Akamatsu reference fails to teach or suggest that the gate insulating layer separates the pixel electrode from the insulating substrate. Moreover, the Examiner has failed to provide any support for modifying the teachings of the Akamatsu reference to produce the claimed structure.

Embodiments of the claimed structure can provide the following advantages, as described in the specification on page 18, line 6 (as amended):

Referring to Fig. 9, the third portions of the gate insulating layer 140 and the second portions of the passivation layer 180 are removed to complete the contact holes 182, 185, 187 and 189. The removal of those portions is performed by dry etching under the condition that the etching ratios for the gate insulating layer 140 and the passivation layer 180 are substantially equal. Since the thickness of the third portions of the gate insulating layer 140 is smaller than that of the second portions of the passivation layer 180, the third portions of the gate insulating layer 140 and the second portions of the passivation insulating layer 180 are completely removed, and simultaneously, the second portions of the gate insulating layer 140 remain to prevent the undercut of the gate insulating layer 140 under the drain electrodes 175 and the storage capacitor conductors 177. (Emphasis added.)

The Examiner bears the initial burden of factually supporting any *prima facie* conclusions of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP §2142.

As described above, there is no teaching or technological motivation provided in the Akamatsu reference to produce the structure recited in claim 1. Consequently, the Examiner's rejection is unsupported. Applicants respectfully request that the Examiner withdraw the rejection of claims 2-5 under 35 U.S.C. § 103.

Double Patenting

Claims 1-5 have been rejected under the judicially-created doctrine of obviousness-type double patenting over claims of U.S. Publication No. 2005/0030440 to Lee et al. The Examiner states, in part:

Claims 1-5 are rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims of

U.S. Pub No. 2005/0030440. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are broader in scope than the claims of US Pub No. 2005/0030440. (Emphasis added.)

Applicants respectfully traverse the Examiner's rejection. The Lee publication is a pending patent application, not an issued patent. Therefore, only a provisional double patenting rejection would have been proper. Applicants further note that the present application has a U.S. filing date of January 16, 2004, and claims priority from Korean patent application no. 2003-003299, filed January 17, 2003. The Lee publication has a later U.S. filing date (July 1, 2004) and claims priority from later-filed Korean patent applications (2003-0044581, filed July 2, 2003; 2003-0055415, filed August 11, 2003; and 2003-0055416, filed August 11, 2003).

For at least these reasons, Applicants respectfully request withdrawal of the Examiner's obviousness-type double patenting rejection.

New Claims 15-29

New claims 15-29 have been added with this amendment. Independent claim 15 recites, in part:

a passivation layer formed on the data line and the drain electrode and having a first contact hole exposing the drain electrode at least in part and a portion of an upper surface of the gate insulating layer (emphasis added.)

Claims 16-19 depend from claim 15.

Independent claim 20 recites, in part:

a passivation layer formed on the data line and the drain electrode and having a first contact hole, wherein a bottom of the contact hole is formed by a portion of an upper surface of the drain electrode and a portion of an upper surface of the passivation layer (emphasis added.)

Claims 21-24 depend from claim 20.

Independent claim 25 recites, in part:

a pixel electrode formed on the passivation layer and contacting the drain electrode and the exposed portion of the gate insulating layer through the first contact hole, wherein the pixel electrode contacts an upper surface of the gate insulating layer. (Emphasis added.)

Claims 26-29 depend from claim 25.

Applicants respectfully submit that the new claims 15-29 are allowable and request allowance therefor.

CONCLUSION

With respect to all amendments and cancelled claims, Applicants have not dedicated or abandoned any unclaimed subject matter and moreover has not acquiesced to any rejections and/or objections made by the Patent Office. Applicants reserve the right to pursue prosecution of any presently excluded claim embodiment in future continuation and/or divisional applications.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. Should the Examiner have any questions, the Examiner is invited to call the undersigned Attorney for Applicants at (408) 392-9250.

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Respectfully submitted,



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